



Vulcan XH558 over Thurleigh, 25 Sept 2014 (photo B Tomlinson)



Bldg 109, 25 Sept 2014 (photo B Tomlinson)

Vulcan over RAE Bedford On 25 September, Thurleigh airfield was privileged to be on the route of Vulcan XH558 making its final display flight of the year. This was the “Cold War Tour” of 10 former Vulcan V-bomber bases, starting from RAF Finningley (now Doncaster airport) and continuing via Scampton, Coningsby, Marham, Honington, Wyton, Gaydon, Wittering, Cottesmore and Waddington. Undertaken to commemorate the 25th anniversary of the fall of the Berlin Wall in 1989, the flight’s route from Wyton to Gaydon crossed over Thurleigh. During the critical years of the cold war, Thurleigh acted as a remote dispersal base for 4 Vulcans – quite a sight (and sound!) when they departed as a group. On this occasion, the aircraft flew over at about 500ft, roughly down the line of the main runway, and turned slightly to head over Sharnbrook, as in photo above. More information about this event and other activities can be found at Vulcan to the Sky (www.vulcantothesky.org). The Vulcan team still need money to support these flying events. BAHG has made a donation.

[You can see a video of the flypasts at Gaydon here.](#)

Work in the Archive We are making a start on reviewing the 100 or so films about Naval R&D at Bedford that we recently acquired from the RAF Museum at Hendon, as reported in Issue 14 in May. Most of these films are 35mm, so pose a challenge to us to view them – we only have a simple viewing machine, not a full projector. Another task is that we also have to ensure that our acquisition and storage processes for all our material are compatible with FAST’s procedures, now that FAST is accredited as a national museum. And just a reminder to everyone – if you come across something to do with RAE Bedford in your attic or in a cupboard, don’t throw it away. If you find *anything* – photographs, brochures, log books, whatever – please donate it to us.

Canberra WK163 - World Record Holder (by Reg Harlow) Many of the aircraft operated by RAE Bedford had chequered histories prior to arrival at Thurleigh. The best known is probably the Fairy Delta 2 WG774 which, flown by Peter Twiss, set a new world speed record of 1132 mph on 10 March, 1956. Less well known is the history of Canberra WK163, which was the first Canberra to be transferred from Pershore to Thurleigh on 1 July, 1976.

Built by A V Roe at Woodford in 1954, WK163 was transferred to Armstrong Siddeley Motors Ltd at Bitteswell Leicestershire, on 28 January 1955 for Viper engine trials. It flew a total of 39½ hours on Viper development during its eleven months with ASM. On 2 December 1955 the aircraft was transferred to Napier and Sons at Luton, becoming the Scorpion Rocket Motor test airframe.

WK163 first flew with its rocket installation on 20 May 1956 and, whilst undertaking rocket motor trials, the aircraft set the world record for aircraft altitude at 70,310ft on 28 August 1957, piloted by Mike Randrup with Walter Shirley as flight observer. Whilst at Napier the aircraft also test-flew air-sampling equipment that was to be used in conjunction with the Operation Grapple nuclear tests of 1958.



Picture Left - At Bedford 8 September, 1980 (Neg. B5389E)

After cancellation of the Scorpion programme the aircraft was transferred to RAF Pershore on 30 April 1959 and was used for Infra-Red Line-Scan development. In April 1966 WK163 was converted from B2 to B6 specification by replacing the mainplanes and engines. It was used in this guise for various radar research programmes. In April 1972 the B2 nose was replaced with a B6 nose from Canberra

Bedford Aeronautical Heritage Group

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XH568. Radar trials continued at Pershore until radar-related flying was transferred to Bedford in 1976.

At Bedford the Infra-Red Line-Scan research and development continued. The aircraft was also used as a “skin target” for the Blue Fox radar and as a transponder target for Homing-Head projects. Extensive installation work was carried out in the late eighties. Equipment fitted included three Primary Infra-Red Sensors in the Bomb Bay, a Forward Looking IR (FLIR) sensor in the nose, numerous tape recorders, a data-link transmitter and two downward-looking vertical cameras.

WK163 continued radar research operations until Bedford airfield closed in 1994, being flown to Farnborough on 24 March 1994 and then stripped of all the research equipment. The aircraft was purchased the same year by Classic Aviation Projects Ltd. and registered with the UK CAA as G-BVWC. After restoration to its original B2 configuration and re-painting to the original World Record scheme, the aircraft made its debut on the UK air show circuit in 1997. Fittingly, one of the flight test crew was Dusty Miller, previously a navigator at Bedford.



At Bedford 28 August, 1991 (Neg. A6569)

The aircraft was refurbished at Coventry during 2002 and re-painted in the Bomber Command scheme with a 617 Sqn red nose flash. It continued flying from May 2003 until 2006 when it suffered an engine failure. After much searching, a replacement engine has been obtained and it is hoped that WK163 will rejoin the air show circuit after completion of a major overhaul currently taking place at Coventry airport.

Tornado Anniversary Originally known as the Multi-Role Combat Aircraft (MRCA), the Tornado aircraft made its first UK flight on 30 October 1974. The very first flight was in Germany in August. Thus it is the 40th anniversary this year. Plans by the various user nations could see the type continue in operation for a further 10 years. RAE Bedford conducted wind tunnel tests on the configuration (picture, right, in 8x8 tunnel, 1971 – neg B9635-Bk1A). Aero Flight evaluated its low speed and high speed handling qualities through flight simulation. In later years, a variety of research topics were undertaken with our own Tornado ZA326.



Science Museum We received an enquiry recently from the Science Museum in London about Neil Armstrong’s visit to RAE Bedford in 1971, when he flew the HP115. This was reported in an earlier Newsletter (Issue 6, Sept 2012) shortly after Neil Armstrong’s death in August 2012. The Museum was hosting a visit from Armstrong’s son and wanted to present him with a photograph of his UK visit and a copy of the book *Wings Over Thurleigh*. We were able to supply both at very short notice, and the presentation was apparently well received.

The Enclave The research offices of Aero Flight and BLEU became known as the Flight Systems Enclave. This site is now owned by Millennium Studios, who have made many changes – see picture outside Bldg 109 at top of this newsletter. The most recent is to demolish the small simulator dome attached to building 109. We have only just discovered this. The large dome is still there.

Anniversaries As we approach 2015, has anyone a special memory of an event of interest from any of the “5” years ie 1955, 1965, 1975, 1985, 1995? For example 1955...Aero Flight Division moved from Farnborough to Bedford, 1965...extensive wind tunnel work on Concorde, 1975...Harrier XW175 arrived, 1985...Advanced Flight Simulator completed, 1995...DERA formed. Please send us your recollections.

FASTA AGM FASTA is the membership part of the Farnborough Air Sciences Trust, our “parent” body. The FASTA AGM will be held on 25 Nov 2014, at Farnborough. We will participate and give a short report on our activities over the year.

Talks During 2014, three speakers from BAHG (Reg Harlow, Barry Tomlinson and Barry Moulang) have given a total of 15 talks on the history of RAE Bedford and other aviation themes, to a wide variety of organisations. These included the Boscombe Down and Weybridge Branches of the Royal Aeronautical Society, local history societies (Olney and District, Roxton, Sandy and Biggleswade), the Rushden Branch of the British Legion, Newport Pagnell and District Probus Club, the Northampton Vintage Motorcycle Club and the Hitchin Branch, Institute of Advanced Motorists. With our final two talks on 7 Oct, we now have no more scheduled in 2014.

BAHG Web site We continue to update this site but would welcome contributions of more content (or suggestions). We are building up a list of links to movie clips on the internet relating to RAE Bedford. This will be posted on the web site shortly. If you can add to this, please contact us.